

KUBERNETES FROM ZERO · FOUNDATIONS 4 OF 12 · LESSON 4 · LESSON KIT · HOMEWORK

Kubernetes from Zero, part 4: Your first Pod

Exercises drawn only from the lesson: recall, run this and explain, predict the outcome.

Every command ran on a kind v0.33.0 cluster (node v1.37.0, kubectl v1.37.2) on 10 Nov 2026. Cluster: k8s-ep04.

Use the kind cluster from part 3 and the namespace `k8s-from-zero`. The lesson's cluster is named `k8s-ep04`, so node names on yours will differ. Answers are in the separate answer key.

Recall

Answer from memory, then check the lesson.

1. What is a Pod, in the docs' words as the lesson quotes them?

2. Name the three properties the lesson says follow from that, and say where the IP lives.

3. Name the four required top-level fields, and the fifth field you see when you read an object back. Who writes the fifth?

4. What does `containerPort` do, and what is the default pull policy for a tag other than `latest`?

5. Name the five Pod phases, and the three container states.

SCAN FOR THE LESSON

Lesson: **Kubernetes from Zero, part 4: Your first Pod**

https://aitamer.news/posts/k8s-from-zero-04-your-first-pod/?utm_source=lessonkit&utm_medium=pdf&utm_campaign=k8s-04&utm_content=homework

NEXT IN THE SERIES Next: Lesson 5, kubectl essentials. Kubernetes from Zero, part 5, kubectl essentials. Lesson page

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6 What are the three `restartPolicy` values, and how does the restart wait grow?

Run this and explain

Run each command, then answer.

7 Apply `pod.yaml` and run `kubectl get pods -n k8s-from-zero` at once, then again a few seconds later. What STATUS values does the lesson show, and what does `READY 1/1` mean?

8 Read `kubectl describe pod hello -n k8s-from-zero` from the events upward. Which four reasons does the lesson list, in order?

9 Run the three `kubectl exec` commands from step 6. What three facts do they confirm?

10 Forward `8080:80` and curl the local port. What does the first terminal print when the curl arrives, and how do you stop the tunnel?

11 Run the `grep -E` command from step 8, and the jsonpath that prints `.status.phase`. What five keys come back, and what is the phase?

12 Apply `once.yaml`, `crash.yaml` and `typo.yaml`. After about a minute, what STATUS does each show in the lesson, and what phase is underneath `once`, `crash` and `typo`?

13 Run `kubectl logs crash -n k8s-from-zero --previous`. What two lines does the lesson show?

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Predict the outcome

Write your prediction first. Then check the answer key.

14 You write a heading into the container's `index.html`, delete the Pod, and apply `pod.yaml` again. What does a fetch of the page show, and why?

15 Apply a Pod whose namespace is spelled `k8s-form-zero`. What error does the lesson quote?

16 The manifest says `spec.contianers`. What does kubectl do, and which command looks up the real field name?

17 `kubectl exec` of `bash` prints `exec: "bash": executable file not found in $PATH`. What does the lesson tell you to try?

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